Master of Engineering, Biomedical Engineering Specialization

Requirements
Effective Spring 2012

Students must take a minimum of 15 semester credits of biomedical engineering (BIOM) courses

Core Course Requirements
BIOM 570/MECH 570 Bioengineering 3
BMS 500 Mammalian Physiology I 4

Foundation Courses
Select a minimum of 12 credits from the following: 12
BIOM 525/MECH 525 Cell and Tissue Engineering
BIOM 526/MECH 526 Biological Physics
BIOM 531/MECH 531 Materials Engineering
BIOM 532/MECH 532 Material Issues in Mechanical Design
BIOM 533 or CIVE 534 Biomedical Tools for Engineers 2
BIOM 543/CBE 543 Membranes for Biotechnology and Biomedicine
BIOM 573/MECH 573 Structure and Function of Biomaterials
BIOM 671/MECH 671 Orthopedic Tissue Biomechanics

Depth Courses
Select a minimum of 8 credits from the following not taken in another category: 8
ANEQ 565 Interpreting Animal Science Research
BC 565 Molecular Regulation of Cell Function
BIOM 531/MECH 531 Materials Engineering
BIOM 592 Seminar
BMS 501 Mammalian Physiology II
BMS 575 Human Anatomy Dissection
BMS 631 Mechanisms of Hormone Action
CBE 503 Transport Phenomena Fundamentals
ECE 512 Digital Signal Processing
ERHS 712 Physics of Diagnostic Imaging
HES 531 Muscle and Joint Mechanics
MECH 530 Advanced Composite Materials
MIP 651 Immunobiology
NB 505 Neuronal Circuits, Systems and Behavior

Breadth Courses
Select a minimum of 3 credits from the following: 3
MATH 545 Partial Differential Equations I

STAT 511 Design and Data Analysis for Researchers I
STAT 512 Design and Data Analysis for Researchers II
STAT 520 Introduction to Probability Theory
STAT 521 Stochastic Processes I

Program Total Credits 30

A minimum of 30 credits are required to complete this program.

1 Additional courses may need to be taken as supplemental requirements to satisfy provisional admission requirements, course prerequisites, or supplemental coursework stipulations.
2 Students with a strong background in Cellular and Molecular Biology may substitute CM 502 for BIOM 533 or CIVE 534.

Seminar, thesis, and independent study credits will not apply toward degree.